Work Orde	r ID 89373 42:22 PM					Page 1					
Revision ID: Item Name:		t Qty: 1.00 d Qty: 1.00	*1* *1*	Accept	*N900 Cust Item Customer:	ID:	100)* s		rt *N	
Approvals:			Date: 17/08	2 Tooling: SPC (Y/N):		ate:		F	Run Sta		R1* R2*
Sequence ID/ Work Center ID	Opera Descr	ation iption		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision N						· · · · · · · · · · · · · · · · · · ·				
IIN-D412-742	E		Keso.							_	
*100 *100* DC Document Control	DOCU	MENT CONTRO Memo Photocopy	OL bluefile & type labels pe	0.00 0.00 1 PPP D412-742-018	(1) 7(w/(6) CHG002				/ /1	5 12	-10-15
*110 *110* Packaging Packaging	Pick K	it Memo		0.00				ΙX		70	2-10-1
120 *120*	QC4- :	·	s for completeness	0.00 Q	1) 1/10/16						
QC		Memo		0.00							

Quality Control

												DQA:	Dat	te:	
NCR:	Yes	/ No				WORK ORDER NON-	100	NFORM	MANCE / UP	DATE		·			
												QA Closed:	Da	te:	•
Work Orde	or.					DISPOSITION			•						
WOIK OIG	Ξ1.		······································			Rework	1	Skid-tube Crosstube				1	Water Jet	$\overline{}$	Engineering
Part I	No.					Scrap	1 1		Machining	Small Fab	\dashv	Pro	d. Eng. Coor.	\square	Quality
, 5, 1						·			noforming	Finishing	-	4	e/Packaging	П	Other
NCR No.						Work Order Update	1	l l	Large Fab	Composite					
							_			·		-			
Root					Descri	ption of work order update		nitial	Ac	tion		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	n	QC Inspector
Doc/Data															
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		Bending				Bend		Grain				Ovalized			Pressure/Forced
	Centre Not Concentric to O/S					BOM/Route		Hardware				Over/Under tolerance			Temperature/Cure
		Cracks				Broken/Damaged		Inspect	on Incomplete	[Part Incorre	ct .		Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/	Part Lost/Missing		Wrong Stock Pulled			

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Moved

Positioned Wrong

Power Loss/Surge

Other

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord August-24-12 1		373						Page 2					
Item ID: Revision ID: Item Name:	D412-742-0 Cable Guard	18		Accept	*N900	040	100)* ·	Setup S	tart top	*NS		
Start Date: Required Date: Reference:	8/21/12 9/14/12	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:							
Approvals:	Process Pla	ın:	Date:	Tooling:	Date:			I	Run S	tart	*NR1*		
••					Da		S	top	*NR2*				
Sequence ID/ Work Center I	D ·	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty		Reject Number	Insp. Stamp	
130 *130* Packaging		Packaging Memo		0.00				 	.		Ol	10/165	
Packaging			pack for shipping as per	PPP D412-742-018								1	
140		QC21- Final Inspection -	- Work Order Release	0.00									

MLS 12-10-16 MLS 12-10-16

0.00

Memo

140

*14**0***

Quality Control

											DQA	: Da	te: _	
NCR:	Yes /	No				WORK ORDER NON-O	100	NFORM	MANCE / UPD	ATE				
											QA Closed	: Da	te:	•
Work Orde	or:					DISPOSITION				AGAINST DE	PARTMEN	T/PROCESS		
WOLK OLD	EI		·			Rework]		Skid-tube	Crosstube	1	Water Jet		Engineering
Part I	No.					Scrap			Machining	Small Fab	Pr	od. Eng. Coor.	H	Quality
						Use-as-is	1		noforming	Finishing	4	ore/Packaging	П	Other
NCR I	No					Work Order Update			Large Fab	Composite	1	Supplier		
				,										
Root					1	ption of work order update	1	Initial	Actio		Sign &		İ	
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descri	ption	Date	Verificatio	n	QC Inspector
Doc/Data	Ш										1		ļ	
Equip/Tooling												1		
Operator							1						1	
Material														
Setup													ł	
Other	Ш											1		
Process												<u> </u>	1	
Supplier												ļ		
Training														
Unapproved							<u> </u>							
						<u> </u>	AUI	T CATE	GORY					
Landi	ng Gea	r				General					_			
Bending						Bend		Grain			Ovalized			Pressure/Forced
Centre Not Concentric to O/S					o/s	BOM/Route		Hardwa	re	<u> </u>	Over/Unde	er tolerance		Temperature/Cure
	Cra	acks				Broken/Damaged		Inspecti	spection Incomplete Pa			ect		Weld
	∐ Cri	ushed/0	Crimped.			Burrs		Instruct	ions Incomplete/Ur	nclear	Part Lost/N	⁄lissing		Wrong Stock Pulled
Cuffs Contamination					Contamination	Г	Maintenance Pa				d			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

August-24-12 1:42:21 PM

Work Order ID:

89373

. Parent Item:

D412-742-018

Parent Item Name:

Cable Guard

Start Date: 8/21/12

Required Date: 9/14/12

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A New Issue 06-05-05 JLM IPP rev:B As per Rev B 06-08-03 JLM 06.09.12 EC

IPP revC per ecn 844 06.09.12 E0 was replace with D3672-1 DD verf:JLM

IPP Rev:D 10.06.10 NAS 1515H3L

600

IPP

		rev:E 12.01.12	PER IIN REV.E I	DD VEF	RF:EC									•
	Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
1	D3499-042		Manufactured	No			110	Each	6.0000	1	1 (٦	a	
S	Cable Guard Assembly										- St	<u>ر</u>		
					Location		Loc Qty	Lo	oc Code		O			1
	n				FG		6							ı
					840	193	4							•
/					860	35	2				IX_			
_	AN3C5A		Purchased	No			110	Each	1,513.0000	5	5	, 1	√ 10	ک ر
U	Bolt										SD	10-1	\mathcal{O}^{-1}	>· •
					Location		Loc Oty	<u>Lo</u>	oc Code		,			
					FP001		7							
					115	835	7							
					ST350		1506							
						835	0							
					116	419	28							
					117	343	13							
					117	764	7							
					117	872	2							
					119	749	23				· · · · · · · · · · · · · · · · · · ·			
					120)423	28							
					121	255	27							
					121	708	500				5x			
						2141	278				, ,			

122800

											DQA:	Date:			
NCR:	Yes	/ No				WORK ORDER NON-	WORK ORDER NON-CONFORMANCE / UPDATE								
·											QA Closed:	Date:			
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	٠		
Tronk Orak	-					Rework	7	Skid-tube Crosstube]	Water Jet	Engineering		
Part i	No.					Scrap	1	l .	Machining	Small Fab	Pro	od. Eng. Coor.	Quality		
	-					Use-as-is		Therm	noforming	Finishing	Rec/Sto	re/Packaging	Other		
NCR No.					Work Order Update]		Large Fab	Composite]	Supplier				
Root		<u> </u>		1	Descri	tion of work order update	Τ	Initial	Ac	tion	Sign &				
Cause	ļ	Date	Step	Qty	i	or Non-conformance		nief Eng		cription	Date	Verification	QC Inspector		
Doc/Data	П						1								
Equip/Tooling							1								
Operator				,											
Material															
Setup															
Other															
Process	Ш														
Supplier			``)											
Training	Ш														
Unapproved	Ш				<u> </u>		<u> </u>						<u> </u>		
							AUI	LT CATE	GORY						
Landi	ing G	Gear				General	_	,			_		7		
		Bending				Bend	\perp	Grain		:	Ovalized		Pressure/Forced		
	Centre Not Concentric to O/S					BOM/Route		Hardwa	re		Over/Unde	r tolerance	Temperature/Cure		
	-	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ect	Weld		
	-	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/	/Unclear	Part Lost/N	lissing	Wrong Stock Pulled		
	Ш	Cuffs				Contamination	L	Mainte	nance	<u> </u>	Part Moved	I			
	Ш	Heat Trea	it			Countersink	L	Mislabeled			Positioned	-			
	1 1	Inspection	n Strin in	Tube		Cut Too Short		Misread	1		Power Loss	/Surge	Other		

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print August-24-12 1:42										Page
Work Order ID:	89373									
Parent Item:	D412-742-018						Start D	ate: 8/21/12	Required D	ate: 9/14/12
Parent Item Name:	Cable Guard						Start (Qty: 1.00	Required (Otv: 1.00
? r :			NI-		110	rt				
AN3C7A BOLT		Purchased	No		110	Each	230.0000	3	3 Ω	
BOLI									01	
				Location	Loc Qty		Loc Code			
				ST351	230					
				113149	14				_	
				116169 117313	l 10					
				117619	10 12			-		
				117688	6					
				119749	1					
				120731	8					
				121185	26					
				121541	2				_	
				122141	100			_3K	· 	^ š
/				122800	50					
AN3C10A Bolt		Purchased	No		110	Each	40.0000	2 5	<u>ئ. </u>	
				Location	Loc Qty		Loc Code			
				ST351	40					
				112489	1					,
_				119798	39			<i></i> _ <i></i>	((
D3672-1 Phenolic Washer		Manufactured	No	_	110	Each	1,155.0000	10	2 ¹⁰	
				Location	Loc Qty		Loc Code	0,		
				ST060	1155					
				72229	4					
				7627 <u>7</u>	13			10x		
				80369	128			<u></u>		
/				83608	500					
				85222	510					
AN960C10L washer	NAS1149C0332R	Purchased	No		110	Each	21.0000	10 \mathcal{M}	J3248	D 8
				Location	Loc Oty		Loc Code		122740 1	10-10
•				ST	21				10	4/0-15.
				107534	21					
August-24-12 1:42) 12 D) (op Packet Print					Page

NCR:	Yes /	No
14C11.	103 /	110

WORK ORDER NON-CONFORMANCE / UPDATE

DQA:	Date:	

								<u></u>		QA Closed:	Date	· .			
Work Orde	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No						Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root]		Descri	ption of work order update	Initial	Α	action	Sign &					
Cause		Date	Step	Qty		or Non-conformance	Chief Eng	Des	scription	Date	Verification	QC Inspector			
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
						F	AULT CAT	GORY		-					
Landi	ing G	iear				General					_	_			
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat					Bend BOM/Route Broken/Damaged Burrs Contamination Countersink	Instruction Maint Mislab	tion Incomplete tions Incomplete enance eled	e/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled			
Inspection Strip in Tube					<u> </u>	Cut Too Short	Misrea			Power Loss,	/Surge	Other			
					<u> </u>	Drill Holes	Offset								
	\vdash	Torque V			` _	Drawing		Calibration							
	Turning Sequence Wave/Twist in Tube					Finish Folio		Sequence e Dimensions							